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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,603	04/13/2001	Wu-Cheng Cheng	W9515-01	3751

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EXAMINER

ILDEBRANDO, CHRISTINA A

ART UNIT PAPER NUMBER

1725

DATE MAILED: 12/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/833,603

**Applicant(s)**CHENG ET AL. **Examiner**

Christina Ildebrando

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 32-39, 41-44, 46-49, 51-59 and 61-66 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 32-39, 41, 44, 46-48, 53-59 and 61-65 is/are rejected.
- 7) ☒ Claim(s) 42, 43, 49, 51, 52 and 66 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 14, 2003 has been entered.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 32-35, 44, 46-47, 53-55, 57-59, 61-62, and 64-65 are rejected under 35 U.S.C. 102(b) as being anticipated by Kumar et al.

Kumar et al. (US 5,079,202) discloses FCC catalysts which comprises a zeolite component and an inorganic oxide matrix which contains pollucite (column 1, lines 49-51). Suitable zeolites include Y zeolites, preferably USY and CREY (column 2, lines 5-10). Suitable matrix materials include alumina and silica sols (column 2, lines 10-14). It is taught that the catalyst composition contains 5-70 weight percent zeolite (column 1, lines 60-64). It is taught that the catalyst has a particle size range of 20-150 microns

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and an attrition index of 0-30 (column 2, lines 40-52). With regards to claim 57-59, 61-62, and 64-65, Kumar et al. teaches that the catalyst composition may be combined with a FCC cesium additive to minimize the production of contaminants and coke (column 2, lines 50-60). Such an additive is considered to meet the second particulate material as claimed.

The reference does not disclose the specific properties claimed, i.e. kinetic conversion activity, surface area, and H<sub>2</sub>O pore volume. However, the reference teaches the use of the same materials in amounts falling within the ranges instantly claimed. Therefore, it is the position of the examiner that such properties would inherently be present in the prior art composition. When the examiner has reason to believe that the functional language asserted to be critical for establishing novelty in claimed subject matter may in fact be an inherent characteristic of the prior art, the burden of proof is shifted to Applicants to prove that the subject matter shown in the prior art does not possess the characteristics relied upon. *In re Fitzgerald et al.* 205 USPQ 594.

The “consisting essentially of” language in the claims is noted. The term limits the claim to the specified ingredients and those that do not affect the basic and novel characteristics of a composition. *Ex parte Davis et al.*, 80 USPQ 448. When applicant contends that modifying or additional components in the reference composition are excluded by the recitation “consisting essentially of,” applicant has the burden of showing the basic and novel characteristics of the claimed composition, i.e. a showing

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that the introduction of these components would materially change the characteristics of applicant's composition. *In re De Lajarte*, 143 USPQ 256.

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Kumar et al.

3. Claims 32-39, 41, 44, and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Kukes et al.

Kukes et al. (US 5,308,814) discloses a catalyst composition useful in hydrogenation processes. The catalyst composition comprises zeolite Y and a refractory inorganic oxide such as alumina wherein the zeolite Y is present in an amount in the range of 10-90% (column 8, lines 10-25). USY is also taught as suitable (column 9, lines 1-25). In an example, zeolite Y is combined with a gamma alumina sol to yield a composition containing 80% zeolite and 20% alumina (column 16, Example 14).

The reference does not disclose the specific properties claimed, i.e. kinetic conversion activity, surface area, and H<sub>2</sub>O pore volume. However, the reference teaches the use of the same materials in amounts falling within the ranges instantly claimed. Therefore, it is the position of the examiner that such properties would inherently be present in the prior art composition. When the examiner has reason to believe that the functional language asserted to be critical for establishing novelty in claimed subject matter may in fact be an inherent characteristic of the prior art, the burden of proof is shifted to Applicants to prove that the subject matter shown in the prior art does not possess the characteristics relied upon. *In re Fitzgerald et al.* 205 USPQ 594.

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The "consisting essentially of" language in the claims is noted. The term limits the claim to the specified ingredients and those that do not affect the basic and novel characteristics of a composition. *Ex parte Davis et al.*, 80 USPQ 448. When applicant contends that modifying or additional components in the reference composition are excluded by the recitation "consisting essentially of," applicant has the burden of showing the basic and novel characteristics of the claimed composition, i.e. a showing that the introduction of these components would materially change the characteristics of applicant's composition. *In re De Lajarte*, 143 USPQ 256.

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Kukes et al.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 48, 56, and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. as applied above for claims 32-35, 44, 46-47, 53-55, 57-59, 61-62, and 64-65 above, and further in view of Herbst et al.

The teachings of Kumar et al. are applied as above for claims 32-35, 44, 46-47, 53-55, 57-59, 61-62, and 64-65.

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Kumar et al. does not teach the use of a REUSY zeolite.

Herbst et al. (US 5,055,437) teaches that conventional FCC catalysts usually contain zeolites such as REY, DAY, USY, and REUSY (column 2, lines 15-20).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the invention of Kumar et al. in light of the disclosure of Herbst et al. Herbst et al. teaches the suitability of REUSY as a catalyst in FCC processes and further teaches its equivalence to the USY compositions taught by Kumar et al. Because of the art recognized functional equivalence of the REUSY zeolite to the zeolites taught by Kumar et al. in FCC processes, it would have been obvious to one of ordinary skill to have substituted one known component for the other in the catalyst taught by Kumar et al.

#### ***Allowable Subject Matter***

6. Claims 42-43, 49, 51-52, and 66 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: With respect to claims 42-43 and 51-52, the prior art of record does not teach or suggest a catalyst composition wherein the zeolite is CREY or REUSY, in combination with the other features instantly claimed. With respect to claim 49, the prior art of record does not teach or suggest a catalyst composition have the size instantly claimed, in

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combination with the other features instantly claimed. With respect to claim 66, the prior art of record does not teach or suggest a catalyst composition where the first particle has zeolite in at least 80 weight percent of said particles, in combination with the other features instantly claimed.

### ***Response to Arguments***

8. Applicant's arguments filed August 14, 2003 have been fully considered but they are not persuasive.

With regards to the Kumar et al. reference, applicant argues that Kumar et al. requires the presence of a cesium additive and pollucite which the claimed catalyst does not. This argument has been considered but is not persuasive. Applicant has failed to provide evidence that the use of pollucite would materially affect the basic and novel characteristics of applicant's invention as claimed. The fact that not using pollucite would affect the invention of Kumar et al. is not relevant to the issues at hand.

Applicant's arguments regarding vanadium and cesium are noted but are not commensurate in scope with what has been claimed. Applicant's claims are open to include the use of an additional FCC additive, such as the cesium material taught by the reference. Also, the instant claims do not recite that vanadium is present in the feedstock. Therefore, these arguments are not persuasive.

With regards to the rejection over the Kumar and Herbst references, applicant argues that there is no suggestion to combine the reference. However, the two



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references can be used in the same process of use and the Herbst reference establishes that the use of REUSY is conventional in FCC processes and equivalent to the zeolites taught by Kumar et al., thereby providing motivation to one of ordinary skill to use REUSY in the composition of Kumar et al. with a reasonable expectation of success.

With regards to the Kukes et al. reference, applicant argues that the addition of the hydrogenation promoters is excluded by the "consisting essentially of" language of the instant claims. However, applicant has not provided any evidence that the addition of such promoters would affect the basic and novel characteristics of applicant's invention. Therefore, the rejection is not withdrawn.

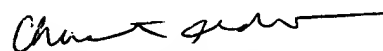
### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Ildebrando whose telephone number is (571) 272-1176. The examiner can normally be reached on Monday-Friday, 7:30-5, with Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

  
Christina Ildebrando  
Patent Examiner  
Art Unit 1725  
12/15/03

CAI  
December 15, 2003